

SUMMARY OF CHINOOK SALMON DATA FOR 1984

The outlook for the 1984 spring chinook run to Idaho is again very poor (10,000 fish or less). This year will mark the sixth consecutive year of record or near-record low levels (Fig. 1). Both hatchery and wild runs will be extremely depressed. In 1983 the wild population in the Salmon River showed a slight improvement over 1982 (Fig. 2) while the return of hatchery fish to Rapid River declined. Summer chinook are expected to continue at the same low levels seen in recent years (about 4,000-5,000 fish) with some possible improvement in the return of hatchery fish to the South Fork Salmon River.

Based on our current run projections, a department personnel believe that adequate grounds exist to justify a complete closure of all Indian and non-Indian salmon fishing in Idaho in 1984.

Clearwater River Drainage

The estimated return of spring chinook to the Clearwater River in 1983 was only about 1,200 fish (Table 1). Kooskia Hatchery received 356 adults and 1 jack, while Dworshak obtained only 18 adults. The 1984 return is expected to be no greater and perhaps less than that occurring in 1983. Based on the poor jack return in 1983, it is doubtful whether Kooskia will be able to provide enough eggs to fill more than a small portion of its production capacity. No adults are anticipated at Dworshak in 1984.

Last year we trapped adults at the Red River weir for the first time. We captured 138 adult chinook and no jacks. These fish provided 128,196 eggs which were shipped to Rapid River and will be returned to Red River as fingerlings in June. The lack of jacks in 1983 forecasts a very poor return for 1984.

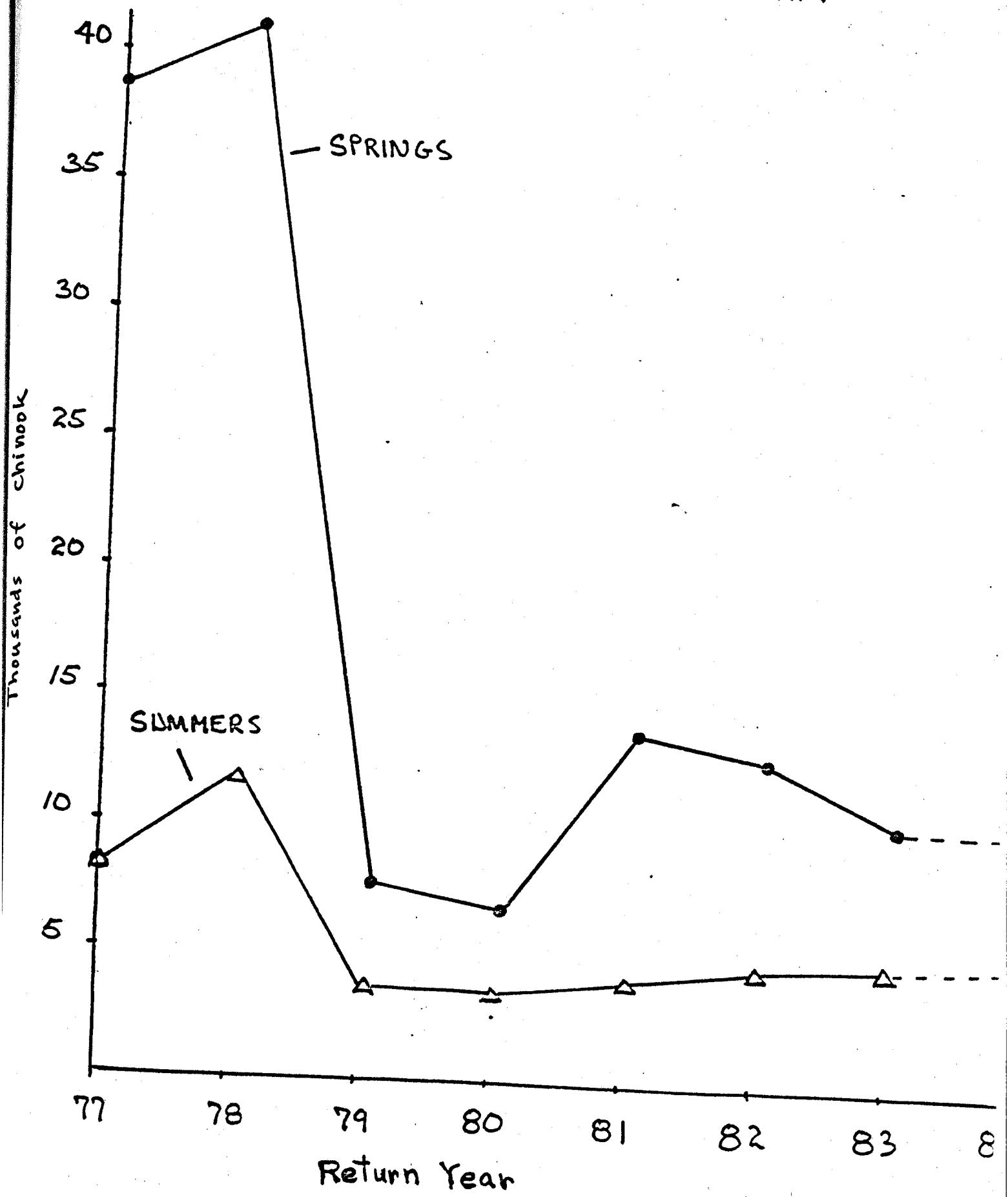
Snake River

Only one year class of adults is expected back to the Hells Canyon trap in 1984. In 1983, we managed to trap 16 four-year-olds. Assuming that the new trap will provide for better trapping in 1984, an optimistic forecast would be about 50-100 adults this year.

Salmon River Drainage

Redd counts of wild spring chinook in the upper Salmon River generally showed a slight improvement in 1983, but were still well below historical averages (Table 2). The return to the Middle Fork Salmon River will again be at a very critical level.

FIGURE 1. SPRING & SUMMER CHINOOK COUNTS
OVER LOWER GRANITE DAM



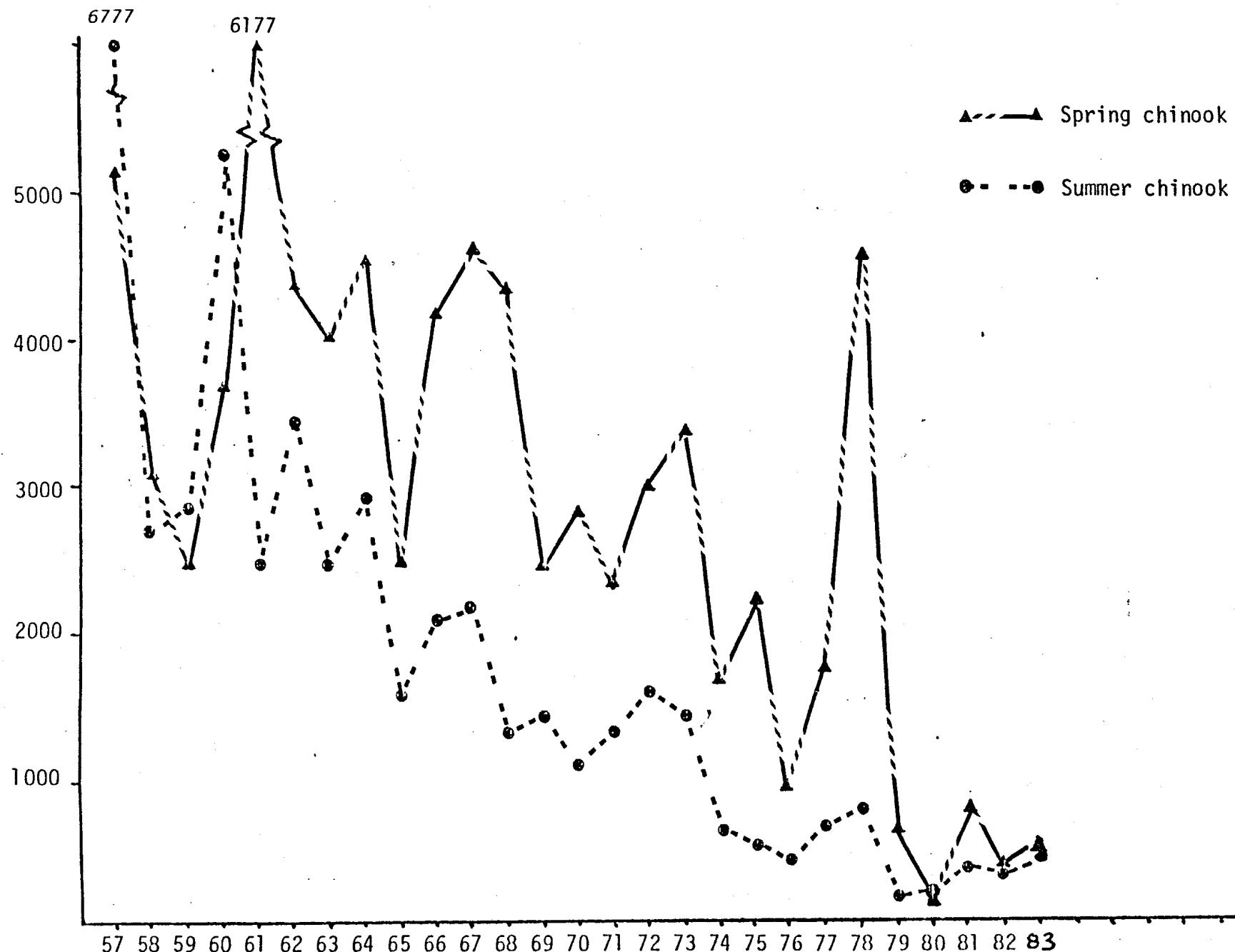


Figure 2. Annual Salmon River chinook redd counts, 1957-1982.

Table 1. Spring chinook counts past Lewiston Dam with present estimates.

| <u>Year</u> | <u>April</u> | <u>May</u> | <u>June</u> | <u>July</u> | <u>August</u> | <u>Total</u> |
|-------------|--------------|------------|-------------|-------------|---------------|--------------|
| 1950 | -- | -- | 1 | 6 | 2 | 9 |
| 1951 | -- | -- | 15 | 12 | 8 | 35 |
| 1952 | -- | -- | 7 | 7 | -- | 14 |
| 1953 | -- | 5 | 23 | 35 | 3 | 66 |
| 1954 | -- | -- | 2 | 15 | 1 | 18 |
| 1955 | -- | -- | 4 | 6 | 3 | 13 |
| 1956 | -- | 2 | 7 | 4 | 1 | 14 |
| 1957 | -- | 11 | 42 | 98 | -- | 151 |
| 1958 | -- | -- | 11 | 11 | 1 | 23 |
| 1959 | -- | -- | 5 | 3 | 2 | 10 |
| 1960 | -- | 14 | 15 | 14 | -- | 43 |
| 1961 | 2 | 24 | 82 | 28 | -- | 136 |
| 1962 | -- | 1 | 6 | 5 | 1 | 13 |
| 1963 | -- | -- | 5 | -- | -- | 5 |
| 1964 | -- | -- | 33 | 31 | 2 | 66 |
| 1965 | -- | 112 | 124 | 82 | -- | 318 |
| 1966 | 3 | 75 | 148 | 129 | -- | 355 |
| 1967 | 4 | 39 | 131 | 252 | 2 | 428 |
| 1968 | -- | 186 | 261 | 528 | 15 | 990 |
| 1969 | 1 | 697 | 1,742 | 103 | 4 | 2,547 |
| 1970 | 87 | 427 | 562 | 620 | 4 | 1,700 |
| 1971 | -- | 107 | 801 | 1,277 | 2 | 2,187 |
| 1972 | 1 | 172 | 2,060 | 1,199 | 35 | 3,467 |
| 1973 | | | | | | 5,000 |
| 1974 | | | | | | 1,400 |
| 1975 | | | | | | 1,100 |
| 1976 | | | | | | 1,839 |
| 1977* | | | | | | 3,946 |
| 1978 | | | | | | 3,081 |
| 1979 | | | | | | 520 |
| 1980 | | | | | | 825 |
| 1981 | | | | | | 1,425 |
| 1982 | | | | | | 2,900 |
| 1983 | | | | | | 1,235 |

*includes 1,200 adults released from the Clear Creek National Fish Hatchery

Table 2. Salmon River Drainage spring chinook redd counts, 1957-1983.

| <u>Year</u> | <u>Alturas Lake Creek</u> | <u>Bear Valley Creek</u> | <u>Elk Creek</u> | <u>Lemhi River</u> | <u>Marsh Creek Drainage</u> | <u>Sulphur Creek</u> | <u>Upper East Fork</u> |
|-------------|-----------------------------------|----------------------------------|----------------------|------------------------|-------------------------------------|--------------------------|--------------------------------|
| 1983 | 27 ^a | 56 | 38 | 50 | 33 | 8 | 121 |
| 1982 | 9 ^a | 39 | 9 | 163 | 40 | 3 | 28 |
| 1981 | 4 ^a | 60 | 23 | 12 | 66 | 37 | 76 |
| 1980 | 7 | 15 | 8 | 47 | 9 | 2 | 7 |
| 1979 | 29 | 69 | 49 | 154 | 47 | 15 | 56 |
| 1978 | 303 | 184 | 208 | 796 | 270 | 64 | 841 |
| 1977 | 85 | 129 | 86 | 474 | 98 | 5 | 168 |
| 1976 | 16 | 76 | 61 | 241 | 48 | 14 | 75 |
| 1975 | 60 | 215 | 169 | 366 | 201 | 50 | 348 |
| 1974 | 42 | 130 | 108 | 215 | 210 | 30 | 346 |
| 1973 | 153 | 387 | 369 | 485 | 518 | 78 | 665 |
| 1972 | 143 | 221 | 212 | 507 | 312 | 71 | 448 |
| 1971 | 50 | 108 | 173 | 407 | 281 | 58 | 370 |
| 1970 | 68 | 334 | 302 | 371 | 456 | 93 | 468 |
| 1969 | 41 | 356 | 349 | 360 | 235 | 138 | 174 |
| 1968 | 110 | 574 | 483 | 589 | 466 | 142 | 622 |
| 1967 | 74 | 445 | 420 | 804 | 650 | 134 | 614 |
| 1966 | 119 | 534 | 525 | 819 | 406 | 142 | 511 |
| 1965 | 101 | 301 | 203 | 454 | 404 | 43 | 138 |
| 1964 | 80 | 576 | 425 | 1,151 | 709 | 97 | 405 |
| 1963 | 86 | 460 | 654 | 364 | 372 | 332 | 646 |
| 1962 | 138 | 484 | 426 | 1,455 | 345 | 169 | 334 |
| 1961 | 30 | 675 | 384 | 1,871 | 546 | 239 | 818 |
| 1960 | 33 | 386 | 346 | 1,434 | 316 | 79 | 122 |
| 1959 | 18 | 381 | 516 | 524 | 95 | 100 | 223 |
| 1958 | 107 | 341 | 410 | 675 | 262 | 131 | 427 |
| 1957 | 110 | 791 | 398 | 1,023 | 458 | 381 | 572 |

^aReduced by trapping at Sawtooth

Table 2. (Continued)

| <u>Year</u> | <u>Upper Salmon River</u> | <u>Upper Valley Creek</u> | <u>Upper Yankee Fork</u> | <u>Upper Big Creek</u> | <u>TOTALS</u> | <u>FIVE- YEAR AVERAGE</u> | <u>Herd Creek</u> | <u>N.F. Salmon River</u> |
|-------------|-----------------------------------|-----------------------------------|----------------------------------|--------------------------------|---------------|-----------------------------------|-----------------------|----------------------------------|
| 1983 | 161 ^a | 8 | 0 | 27 | 529 | | 7 | NC |
| 1982 | 42 ^a | 1 | 0 | 7 | 341 | | 1 | NC |
| 1981 | 363 ^a | 2 | 16 | 22 | 762 | 446 | 9 | NC |
| 1980 | 47 | 6 | 0 | 4 | 152 | | 0 | NC |
| 1979 | 205 | 25 | 18 | 15 | 682 | | 2 | 24 |
| 1978 | 1,707 | 141 | 60 | 95 | 4,669 | | 26 | 31 |
| 1977 | 698 | 18 | 6 | 9 | 1,776 | 1,932 | 6 | 6 |
| 1976 | 378 | NC | 40 | 22 | 971 | | 27 | 14 |
| 1975 | 509 | 189 | 60 | 77 | 2,244 | | 11 | |
| 1974 | 338 | 127 | 54 | 28 | 1,628 | | | |
| 1973 | 414 | 125 | 104 | 96 | 3,394 | | | |
| 1972 | 748 | 182 | 115 | 60 | 3,019 | 2,622 | | |
| 1971 | 619 | 89 | 89 | 32 | 2,276 | | | |
| 1970 | 432 | 202 | 67 | -- | 2,793 | | | |
| 1969 | 313 | 350 | 53 | 90 | 2,459 | | | |
| 1968 | 637 | 330 | 234 | 90 | 4,277 | | | |
| 1967 | 943 | 253 | 250 | 67 | 4,654 | 3,615 | | |
| 1966 | 699 | 219 | 112 | 127 | 4,213 | | | |
| 1965 | 472 | 204 | 77 | 75 | 2,472 | | | |
| 1964 | 706 | 199 | 146 | 51 | 4,545 | | | |
| 1963 | 638 | 141 | 128 | 181 | 4,002 | | | |
| 1962 | 638 | 157 | 60 | 231 | 4,437 | 4,576 | | |
| 1961 | 813 | 227 | 192 | 382 | 6,177 | | | |
| 1960 | 720 | 83 | 43 | 159 | 3,721 | | | |
| 1959 | 502 | 24 | 10 | 96 | 2,489 | | | |
| 1958 | 535 | 75 | 38 | 140 | 3,141 | 3,662 | | |
| 1957 | 1,118 | 225 | 47 | 233 | 5,356 | | | |

^aReduced by trapping at Sawtooth

The only spring chinook hatchery adults expected back to the Salmon River above the mouth of the Little Salmon River are from releases at Hayden Creek Hatchery on the Lemhi. Adult returns there will probably be less than 200 fish and will be used to fill Pahsimeroi Hatchery needs. Only jack returns are expected at Sawtooth and the Pahsimeroi.

Summer chinook redd counts were also up slightly in 1983, but still remain at remnant levels in most areas (Table 3). Jack returns to the South Fork Salmon River trap in 1983 indicate that enough adults might return in 1984 to fill most of the hatchery capacity at McCall. This is about our only hope for ever restoring summer chinook to harvestable levels in the near future.

The projected return of adult spring chinook salmon to Rapid River in 1984 is 1,000 to 2,000 fish. This is far below the 3,000 fish needed to provide Rapid River's basic mitigation program and provide any surplus fingerlings for the Red River pond. In addition to these needs we could use over 2,000 more fish to provide eggs for Dworshak and Kooskia National hatcheries and the Pahsimeroi hatchery. Surpluses beyond this could be used to provide eggs for the Clearwater River egg incubation channels. This will mark the second consecutive year that Rapid River has fallen short of its adult needs. Table 4 summarizes the adult return and production from Rapid River since 1980.

Table 3. Salmon River summer chinook redd counts, 1957-1982.

| <u>Year</u> | <u>Lower Salmon River</u> | <u>Lower Valley Creek</u> | <u>Lower East Fork</u> | <u>Loon Creek</u> | <u>S. Fork Salmon River</u> | <u>Johnson Creek</u> | <u>Sechesh River Lake Cr.</u> | <u>Lower Big Creek</u> | <u>TOTALS</u> | <u>FIVE- YEAR AVERAGE</u> |
|-------------|-----------------------------------|-----------------------------------|--------------------------------|-----------------------|-------------------------------------|--------------------------|---------------------------------------|--------------------------------|---------------|-----------------------------------|
| 1983 | 111 | 28 | 27 | 7 | 185 ^a | 63 | 98 | NC | 519 | |
| 1982 | 39 | 8 | 14 | 23 | 111 ^a | 37 | 65 | NC | 302 | 349 |
| 1981 | 75 | 17 | 43 | 30 | 126 ^a | 45 | 53 | NC | 289 | |
| 1980 | 11 | 4 | 0 | 9 | 116 ^a | 24 | 20 | NC | 184 | |
| 1979 | NC | 15 | 33 | NC | 115 | 36 | 20 | NC | 219 | |
| 1978 | 349 | 219 | NC | 29 | 251 | 113 | 91 | -- | 1,052 | |
| 1977 | 94 | 63 | 136 | 62 | 226 | 81 | 27 | -- | 689 | 591 |
| 1976 | 44 | 43 | 39 | 31 | 241 | 68 | 17 | -- | 483 | |
| 1975 | 45 | 80 | 38 | 32 | 238 | 69 | 10 | -- | 512 | |
| 1974 | 200 | 45 | 49 | 34 | 218 | 107 | 21 | -- | 671 | |
| 1973 | 224 | 77 | 138 | 78 | 586 | 271 | 74 | -- | 1,448 | |
| 1972 | 412 | 39 | 161 | 150 | 577 | 220 | 87 | NC | 1,646 | 1,239 |
| 1971 | 220 | 147 | 149 | 79 | 421 | 183 | 80 | 52 | 1,331 | |
| 1970 | 150 | 41 | 123 | 43 | 527 | 130 | 63 | 23 | 1,100 | |
| 1969 | 120 | 22 | 138 | 110 | 636 | 273 | 104 | 72 | 1,475 | |
| 1968 | 223 | 63 | 235 | 135 | 515 | 127 | 58 | 33 | 1,389 | |
| 1967 | 365 | 79 | 234 | 96 | 902 | 286 | 140 | 94 | 2,196 | 1,745 |
| 1966 | 390 | 184 | 216 | 49 | 980 | 110 | 140 | 51 | 2,120 | |
| 1965 | 201 | 57 | 131 | 166 | 656 | 116 | 134 | 83 | 1,544 | |
| 1964 | 415 | 71 | 306 | 361 | 1,124 | 310 | 181 | 121 | 2,889 | |
| 1963 | 195 | 50 | 265 | 261 | 1,057 | 266 | 163 | 220 | 2,477 | |
| 1962 | 467 | 115 | 195 | 157 | 1,589 | 295 | 292 | 360 | 3,470 | 3,320 |
| 1961 | 356 | 162 | 198* | 131 | 1,058 | 207 | 198 | 160 | 2,470 | |
| 1960 | 818 | 141 | 303* | 334 | 2,306 | 517 | 524 | 352 | 5,295 | |
| 1959 | 336 | 70 | 192* | 123 | 1,305 | 294 | 285 | 217 | 2,822 | |
| 1958 | 362 | 47 | -- | -- | 1,236 | 269 | 478 | 338 | 2,730 | 4,109 |
| 1957 | 2,406 | 331 | -- | -- | 2,812 | 349 | 344 | 535 | 6,777 | |

*Adjusted for boundary change instituted in 1962.

^aReduced by trapping for Spawntaking

Table 4. Spring chinook salmon production from adult returns to Rapid River Hatchery.

| <u>Adult return</u> | | <u>Distribution</u> | | <u>Smolt release</u> | | | |
|---------------------|--------|---------------------|----------------|----------------------|------|-----------|------------------|
| Year | Number | Green eggs | Hatchery or | # of eyed eggs | Year | Number | Release location |
| 1980 | 1,528 | 1,757,000 | Rapid R. | 1,700,000 | 1982 | 1,474,000 | Rapid River |
| 1981 | 3,087 | 6,122,300 | Rapid R. | 4,409,000 | 1983 | 2,998,100 | Rapid River |
| | | | | | 1983 | 250,000 | Hells Canyon |
| | | | Dworshak | 449,300 | 1983 | 65,000 | N.F. Clearwater |
| | | | Pahsimeroi | 608,400 | 1983 | 437,300 | Pahsimeroi |
| | | | Oxbow (Oregon) | 608,400 | 1983 | 213,000 | Lookingglass Cr. |
| 1982 | 3,646 | 7,482,000 | Rapid River | 4,615,000 | 1984 | 3,200,000 | Rapid River |
| | | | | | 1984 | 500,000 | Hells Canyon |
| | | | Pahsimeroi | 1,332,000 | 1984 | 1,150,000 | Pahsimeroi |
| | | | Dworshak | 868,000 | 1984 | 360,000 | Clear Creek |
| | | | Hagerman | 125,000 | 1983 | 95,400 | Red River |
| | | | Red River | 306,000 | 1984 | 300,000 | Red River |
| 1983 | 1,864 | 3,449,500 | Rapid River | | 1985 | 2,300,000 | Rapid River |
| | | | | | 1985 | 200,000 | Hells Canyon |